QUAD-CITIES NUCLEAR POWER STATION

UNITS 1 AND 2

MONTHLY PERFORMANCE REPORT

JUNE 1981

COMMONWEALTH EDISON COMPANY

AND

IOWA-ILLINOIS GAS & ELECTRIC COMPANY

NRC DOCKET NOS. 50-254 AND 50-265

LICENSE NOS. DPR-29 AND DPR-30

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I. INTRODUCTION

Quad-Cities Nuclear Power Station is composed of two Boiling Water Reactors, each with a Maximum Dependable Capacity of 769 MWe net, located in Cordova, Illinois. The Station is jointly owned by Commonwealth Edison Company and Iowa-Illinois Gas & Electric Company. The Nuclear Steam Supply Systems are General Electric Company Boiling Water Reactors. The Architect/Engineer was Sargent & Lundy, Incorporated and the primary construction contractor was United Engineers & Constructors. The condenser cooling method is a closed-cycle spray canal, and the Mississippi River is the condenser cooling water source. The plant is subject to license numbers DPR-29 and DPR-30, issued October 1, 1971, and March 21, 1972, respectively, pursuant to Docket Numbers 50-254 and 50-265. The date of initial reactor criticalities for Units 1 and 2 respectively were October 18, 1971, and April 26, 1972. Commercial generation of power began on February 18, 1973 for Unit 1 and March 10, 1973 for Unit 2.

This report was compiled by Becky Brown and Robert Tubbs, telephone number 309-654-2241, extensions 245 and 174.

II. SUMMARY OF OPERATING EXPERIENCE

A. UNIT ONE

June 1-6: Unit One began the reporting period holding load at 804 MWe. Load was held at an average of 799 MWe until 1045 on June 3. Due to a seal water leak on 1C Reactor Feed Pump, and 1B being out of service, load was reduced to 400 MWe in three-fourths of an hour. Repairs were completed and load pickup began at 1230, at 200 MWe/hour and 100 MWe/hour, each for 1 hour then 5 MWe/hour to maximum load. A load of 800 MWe was reached and held at 0800 on June 4, and the reactor remained in that status through June 6.

June 7-8: On June 7, at 0130, load was dropped to perform the weekly Turbine tests. However, at 0325, the 1B Recirculation Motor Bearing Oil Level Alarm came up and load was dropped in preparation for a Drywell entry. Load was held at 300 MWe at 0550 and the entry was made at 0910 after de-inerting the Drywell. One and a half liters of oil were added to the bearing and the other oil levels were inspected. At 0925 the entry was completed.

Inerting of the Drywell was started, and load was increased. The load increase continued at various rates until a load of 790 MWe was held at 2110 on June 8.

June 9-21: During this thirteen day period there were no major occurrences. However, load was dropped three times at the Load Dispatcher's request; once on June 14, to perform the weekly Turbine tests, and once on June 21 for both the Load Dispatcher and to perform the weekly Turbine tests.

June 22-23: On June 22, at 0100, an alarm was again received for 1B Recirculation Pump Motor Bearing Oil Level, consequently load was dropped to 400 MWe and the Drywell was de-inerted in preparation for a Drywell entry. The entry was made at 0815 and lasted until 0925. Load was increased, at 0930, and the Drywell was re-inerted beginning at 1115. The load increase continued at various rates until a load of 800 MWe was reached and held at 1920 on June 23.

June 24-26: On each of these days, load was reduced by the Load Dispatcher due to minimum system load requirements. At 2338, on June 26, all rod drift lights on the top half of the full core display energized. They cleared upon re-setting the alarm.

June 27-30: On June 27 load was dropped for the Load Dispatcher and to perform the weekly Turbine tests. Load pickup started at 0615, and was continuing at 5 MWe/hour when, at 1034, the rod drift lights, on the upper half of the full core display, energized again. Load was held, at approximately 665 MWe, and the problem was identified as low voltage in two RPIS modules. The cause of the low voltage was traced to a burned out cooling fan. A temporary fan was installed and the load increase resumed. The load increase continued until the control valves were fully open at 1430 on June 28. Load was held for the remainder of the period. The Unit ended the reporting period holding a load of 796 MWe.

B. UNIT TWO

June 1-9: The Unit began the reporting period increasing load at 5 MWe/hour. At 0300, on June 1, it was observed that the MFLCPR had exceeded 1.00; accordingly, the Nuclear Engineer had load reduced 25 MWe and held at that level. At 0345 MFLCPR was less than 1.00, and at 0800 the load increase was resumed at 5 MWe/hour until 1115. Load was held until June 5 at 1405 when load was dropped to 620 MWe due to high backpressure. On June 7, the Load Dispatcher requested a load increase, which was done, until the alarm for Turbine Low Vacuum was received at 0312 on June 8. At that time, load was held at 725 MWe.

June 10-15: During this period, load was dropped at the request of the Load Dispatcher on June 10, 12, 13, and 14. Also, the weekly Turbine tests were performed on June 13. On June 14 and 15 problems were again encountered with high backpressure and load was held at approximately 680 MWe at 1000 on June 15.

June 16-21: On June 16, Recirc Flow was increased to the maximum and Reactor pressure setpoint to 1005 psig to bring the load to 703 MWe. At 0045 and 0035, on June 17 and 18 respectively, load was dropped for the Load Dispatcher increasing back to maximum load at 0415 and 0500. Load was held on June 19, but was again dropped for the Load Dispatcher on June 20 and 21. During the drop, on June 20, the weekly Turbine tests were performed.

June 22-30: During this period load was reduced for the Load Dispatcher, due to minimum load conditions on June 22, 24, 25, 26, and 27. Load pickup started at about 0500 on each of these days; however, due to the size of the drop, maximum load was never achieved. On June 28 load was held, with the recirculation pumps at maximum flow, and the Unit remaining in this condition for the remainder of the reporting period.

III. PLANT OR PROCEDURE CHANGES, TESTS, EXPERIMENTS, AND SAFETY RELATED MAINTENANCE

A. Amendments to Facility License or Technical Specifications

On April 30, 1981, Amendments 70 and 64 were issued to DPR-29 and DPR-30 respectively. These Amendments consist of changes in the Technical Specifications for each of the two units which change the required setpoints for the Scram and rod block. The new equations are:

$$S \leq (0.58W + 62) \frac{FRP}{MFLPD}$$ for Scram and,

$$S \leq (0.58W + 50) \frac{FRP}{MFLPD}$$ for rod block

B. Facility or Procedure Changes Requiring NRC Approval

There were no Facility or Procedure Changes Requiring NRC approval for the reporting period.

C. Tests and Experiments Requiring NRC Approval

There were no Tests and Experiments Requiring NRC approval for the reporting period.

D. Corrective Maintenance of Safety Related Equipment

The following represents a tabular summary of the safety related maintenance performed on Unit One and Unit Two during the reporting period. The headings indicated in this summary include: Work Request Numbers, LER Numbers, Components, Cause of Malfunctions, Results and Effects on Safe Operation, and Action Taken to Prevent Repetition.

UNIT ONE MAINTENANCE SUMMARY

W.R. NUMBER	LER NUMBER	COMPONENT	CAUSE OF MALFUNCTION	RESULTS & EFFECTS ON SAFE OPERATION	ACTION TAKEN TO PREVENT REPETITION
Q12745		CRD Accumulator	The 111 valve was leaking.	Scram capability was not affected.	The leaking valve was replaced.
Q12886		1/2 Diesel Generator	Erratic Governor operation.	The 1/2 Diesel Generator was still operable and capable of carrying load.	The oil in the governor was changed and the compensator was adjusted.
Q12980		MO-1-1401-38B Core Spray Minimum Flow Valve	The valve motor operator draws high current and trips.	Both Core Spray loops were capable of delivering their design flows.	The valve motor operator was replaced.

UNIT TWO MAINTENANCE SUMMARY

W.R. NUMBER	LER NUMBER	COMPONENT	CAUSE OF MALFUNCTION	RESULTS & EFFECTS ON SAFE OPERATION	ACTION TAKEN TO PREVENT REPETITION
Q12404		Diesel Generator Cooling Water Pump	Small packing leak.	The operability of the cooling water pump and the associated Diesel Generator were not affected.	The pump was replaced.
Q12830		2D RHR Service Water Pump	Small packing leak.	The RHR Service Water pump was capable of supplying the design flow.	The pump was replaced.
Q12828		Drywell Equipment Sump Discharge Valve AO-2-2001-16	Reversed disc on valve stem prevented valve from opening.	Primary Containment was not affected since valve failed in the isolated position.	The disc was repositioned and the valve was successfully leak rate tested.

IV. LICENSEE EVENT REPORTS

The following is a tabular summary of all license event reports for Quad-Cities Units One and Two occurring during the reporting period, pursuant to the reportable occurrence reporting requirements as set forth in sections 6.6.B.1. and 6.6.B.2. of the Technical Specifications.

UNIT ONE

Licensee Event Report Number	Date	Title of Occurrence
81-11/03L	6-18-81	1/2 B Fire Pump Out of Service for Greater than 7 Days
81-12/03L	6-24-81	EHC Fluid Pressure Switch Drift

UNIT TWO

There were no Licensee Event Reports for Unit Two for the reporting period.

V. DATA TABULATIONS

The following data tabulations are presented in this report:

A. Operating Data Report

B. Average Daily Unit Power Level

C. Unit Shutdowns and Power Reductions

OPERATING DATA REPORT

DOCKET NO. 50-254

UNIT ONE

DATE July 1 1991

COMPLETED BY Robert C Tubbs

TELEPHONE 309-654-2241X174

OPERATING STATUS

0000 060191

1. Reporting period: 2400 063081 Gross hours in reporting period: 720

2. Currently authorized power level (MWt): 2511 Max.Depend capacity (MWe-Net): 769* Design electrical rating (MWe-Net): 789

3. Power level to which restricted(if any)(MWe-Net): NA

4. Reasons for restriction (if any):

	This Month	Yr.to Date	Cumulative
5. Number of hours reactor was critical	720.0	4130.8	64837.1
6. Reactor reserve shutdown hours	0.0	0.0	3421.9
7. Hours generator on line	720.0	4067.8	61951.6
8. Unit reserve shutdown hours.	0.0	0.0	909.2
9. Gross thermal energy generated(MWH)	1690453	9460788	125702876
10. Gross electrical energy generated(MWH)	545739	3100009	40478916
11. Net electrical energy generated(MWH)	508414	2887328	37744607
12. Reactor service factor	100.0	95.1	80.9
13. Reactor availability factor	100.0	95.1	85.2
14. Unit service factor	100.0	93.7	77.3
15. Unit availability factor	100.0	93.7	78.5
16. Unit capacity factor (Using MDC)	91.8	86.5	61.3
17. Unit capacity factor (Using Des.MWe)	89.5	84.3	59.7
18. Unit forced outage rate	0.0	1.5	7.4

19. Shutdowns scheduled over next 6 months (Type,Date,and Duration of each):

20. IF shutdown at end of report period,estimated date of startup NA

*The MDC may be lower than 769 MWe during periods of high ambient temperature due to the thermal performance of the spray canal.

OPERATING DATA REPORT

DOCKET NO. 50-265

UNIT TWO

DATE July 1 1981

COMPLETED BY Robert C Tubbs

TELEPHONE 309-654-2241X174

OPERATING STATUS

1. Reporting period: 0000 060181 2400 063081 Gross hours in reporting period: 720

2. Currently authorized power level (MWt): 2511 Max.Depend capacity (MWe-Net): 769* Design electrical rating (MWe-Net): 789

3. Power level to which restricted(if any)(MWe-Net): NA

4. Reasons for restriction (if any):

	This Month	Yr.to Date	Cumulative
5. Number of hours reactor was critical	720.0	4247.6	63080.4
6. Reactor reserve shutdown hours	0.0	0.0	2985.8
7. Hours generator on line	720.0	4221.8	60503.0
8. Unit reserve shutdown hours.	0.0	0.0	702.9
9. Gross thermal energy generated(MWH)	1519200	9657337	124857745
10. Gross electrical energy generated(MWH)	473083	3064800	39786351
11. Net electrical energy generated(MWH)	449764	2909378	37266330
12. Reactor service factor	100.0	97.8	79.7
13. Reactor availability factor	100.0	97.8	83.4
14. Unit service factor	100.0	97.2	76.4
15. Unit availability factor	100.0	97.2	77.3
16. Unit capacity factor (Using MDC)	81.2	87.1	61.2
17. Unit capacity factor (Using Des.MWe)	79.2	84.9	59.6
18. Unit forced outage rate	0.0	1.2	8.6

19. Shutdowns scheduled ove[illegible] months (Type, Date, and Duration of each):

20. If shutdown at end of report period estimated date of startup NA

*The MDC may be lower than 769 MWe during periods of high ambient temperature due to the thermal performance of the spray canal.

APPENDIX B
AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-254
UNIT ONE
DATE July 1 1981
COMPLETED BY Robert C Tubbs
TELEPHONE 309-654-2241X174

MONTH June 1981

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1.	751.1	17.	743.5
2.	743.8	18.	720.8
3.	678.9	19.	747.5
4.	735.6	20.	744.5
5.	751.3	21.	676.5
6.	727.7	22.	495.8
7.	520.5	23.	723.8
8.	699.9	24.	66 .0
9.	736.7	25.	722.0
10.	711.4	26.	659.1
[illegible]	746.8	27.	610.2
12.	705.8	28.	711.3
13.	741.4	29.	766.0
14.	741.3	30.	730.5
15.	728.1		
16.	749.1		

INSTRUCTIONS

On this form list the average daily unit power level in MWe-Net for each day in the reporting month. Compute to the nearest whole megawatt.
These figures will be used to plot a graph for each reporting month. Note that when maximum dependable capacity is used for the net electrical rating of the unit, there may be occasions when the daily average power level exceeds the 100% line (or the restricted power level line). In such cases, the average daily unit power output sheet should be footnoted to explain the apparent anomaly

APPENDIX B
AVERAGE DAILY UNIT POWER LEVEL

DOCKET NO. 50-265
UNIT TWO
DATE July 1 1981
COMPLETED BY Robert C Tubbs
TELEPHONE 309-654-2241X174

MONTH June 1981

DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)	DAY	AVERAGE DAILY POWER LEVEL (MWe-Net)
1.	708.5	17.	617.9
2.	692.5	18.	610.2
3.	698.0	19.	660.9
4.	683.6	20.	557.5
5.	654.6	21.	563.6
6.	588.0	22.	561.5
7.	634.0	23.	673.6
8.	668.5	24.	559.0
9.	661.5	25.	586.3
10.	618.0	26.	586.2
11.	680.4	27.	556.4
12.	632.2	28.	636.8
13.	501.0	29.	644.0
14.	601.8	30.	610.0
15.	638.5		
16.	660.1		

INSTRUCTIONS

On this form, list the average daily unit power level in MWe-Net for each day in the reporting month. Compute to the nearest whole megawatt.

These figures will be used to plot a graph for each reporting month. Note that when maximum dependable capacity is used for the net electrical rating of the unit, there may be occasions when the daily average power level exceeds the 100% line (or the restricted power level line). In such cases, the average daily unit power output sheet should be footnoted to explain the apparent anomaly

APPENDIX D
UNIT SHUTDOWNS AND POWER REDUCTIONS

QTP 300-S13
Revision 5
March 1978

DOCKET NO. 50-254
UNIT NAME Quad-Cities Unit One
DATE July 1, 1981
REPORT MONTH JUNE 1981
COMPLETED BY Robert Tubbs
TELEPHONE 309-654-2241 Extension 174

NO.	DATE	TYPE F OR S	DURATION (HOURS)	REASON	METHOD OF SHUTTING DOWN REACTOR	LICENSEE EVENT REPORT NO.	SYSTEM CODE	COMPONENT CODE	CORRECTIVE ACTIONS/COMMENTS
81-11	810607	F	0:0	A/B	5		CB	MOTORX	Load reduction to perform weekly turbine test and add oil to Recirc Pump Motor Bearing
81-12	810622	F	0.0	A	5		CB	MOTORX	Load reduction to add oil to Recirc Pump Motor Bearing

APPENDIX D
UNIT SHUTDOWNS AND POWER REDUCTIONS

QTP 300-513
Revision 5
March 1978

DOCKET NO. 50-265

UNIT NAME Quad-Cities Unit Two

COMPLETED BY Robert Tubbs

DATE July 1, 1981

REPORT MONTH JUNE 1981

TELEPHONE 309-654-2241
Extension 174

NO.	DATE	TYPE F OR S	DURATION (HOURS)	REASON	METHOD OF SHUTTING DOWN REACTOR	LICENSEE EVENT REPORT NO.	SYSTEM CODE	COMPONENT CODE	CORRECTIVE ACTIONS/COMMENTS
81-13	810613	S	0.0	F	5		ZZ	ZZZZZZ	Load reduction per Load Dispatcher

-1-(final)

VI. UNIQUE REPORTING REQUIREMENTS

The following items are included in this report based on prior commitments to the commission:

A. Main Steam Relief Valve Operations

There were no Main Steam Relief Valve Operations for the reporting period.

B. Control Rod Drive Scram Timing Data for Units One and Two

There were no Control Rod Drive Scram Timings for the reporting period.

VII. REFUELING INFORMATION

The following information about future reloads at Quad-Cities Station was requested in a January 26, 1978, licensing memorandum (78-24) from D.E. O'Brien to C. Reed, et al., titled "Dresden, Quad-Cities, and Zion Station--NRC Request for Refueling Information", dated January 18, 1978.

QTP 300-S32
Revision 1
March 1978

QUAD-CITIES REFUELING INFORMATION REQUEST

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1. Unit: 1 Reload: 6 Cycle: 7

2. Scheduled date for next refueling shutdown: 9-12-82 (Shutdown E0C6)

3. Scheduled date for restart following refueling: 12-5-82 (Startup B0C7)

4. Will refueling or resumption of operation thereafter require a technical specification change or other license amendment: No, Plan 10CFR50.59 reloads for future cycles of Quad Cities Unit 1. The review will be conducted in August, 1982.

5. Scheduled date(s) for submitting proposed licensing action and supporting information: August, 1982 for 10CFR50.59 related changes ~ 90 days prior to shutdown.

6. Important licensing considerations associated with refueling, e.g., new or different fuel design or supplier, unreviewed design or performance analysis methods, significant changes in fuel design, new operating procedures:

   New fuel designs:

7. The number of fuel assemblies.

   a. Number of assemblies in core: 724

   b. Number of assemblies in spent fuel pool: 820

8. The present licensed spent fuel pool storage capacity and the size of any increase in licensed storage capacity that has been requested or is planned in number of fuel assemblies:

   a. Licensed storage capacity for spent fuel: 1460

   b. Planned increase in licensed storage: None

9. The projected date of the last refueling that can be discharged to the spent fuel pool assuming the present licensed capacity: September, 1985 (end of batch discharge capability)

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Q.C.O.S.R.

Revision 1
March 1978

QUAD-CITIES REFUELING INFORMATION REQUEST

1. Unit: 2 Reload: 5 Cycle: 6

2. Scheduled date for next refueling shutdown: 8-30-81 (Shutdown EOC5)

3. Scheduled date for restart following refueling: 12-20-81 (Startup BOC6)

4. Will refueling or resumption of operation thereafter require a technical specification change or other license amendment: No, Plan 10CFR50.59 Reloads for future cycles of Quad Cities Unit 2. The review will be conducted by early August, 1981.

5. Scheduled date(s) for submitting proposed licensing action and supporting information: Early August, 1981 for 10CFR50.59 related changes ~90 days prior to shutdown.

6. Important licensing considerations associated with refueling, e.g., new or different fuel design or supplier, unreviewed design or performance analysis methods, significant changes in fuel design, new operating procedures:

   New Fuel Design: 1. Barrier Fuel
   2. Control Cell Core

7. The number of fuel assemblies.

   a. Number of assemblies in core: 724

   b. Number of assemblies in spent fuel pool: 672

8. The present licensed spent fuel pool storage capacity and the size of any increase in licensed storage capacity that has been requested or is planned in number of fuel assemblies:

   a. Licensed storage capacity for spent fuel: 1460

   b. Planned increase in licensed storage: None

9. The projected date of the last refueling that can be discharged to the spent fuel pool assuming the present licensed capacity: September, 1984 (End of batch discharge capability)

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Q.C.O.S.R.

VIII. GLOSSARY

The following abbreviations which may have been used in the Monthly Report, are defined below:

ACAD/CAM	-	Atmospheric Containment Atmospheric Dilution/Containment Atmospheric Monitoring
ANSI	-	American National Standards Institute
APRM	-	Average Power Range Monitor
ATWS	-	Anticipated Transient Without Scram
BWR	-	Boiling Water Reactor
CRD	-	Control Rod Drive
EHC	-	Electro-Hydraulic Control System
EOF	-	Emergency Operations Facility
GSEP	-	Generating Stations Emergency Plan
HEPA	-	High-Efficiency Particulate Filter
HPCI	-	High Pressure Coolant Injection System
HRSS	-	High Radiation Sampling System
IPCLRT	-	Integrated Primary Containment Leak Rate Test
IRM	-	Intermediate Range Monitor
ISI	-	In-Service Inspection
LER	-	Licensee Event Report
LLRT	-	Local Leak Rate Test
LPCI	-	Low Pressure Coolant Injection Mode of RHRS
LPRM	-	Local Power Range Monitor
MAPLHGR	-	Maximum Average Planar Linear Heat Generation Rate
MCPR	-	Minimum Critical Power Ratio
MPC	-	Maximum Permissible Concentration
MSIV	-	Main Steam Isolation Valve
NIOSH	-	National Institute for Occupational Safety and Health
PCI	-	Primary Containment Isolation
PCIOMR	-	Preconditioning Interim Operating Management Recommendations
RBCCW	-	Reactor Building Closed Cooling Water System
RBM	-	Rod Block Monitor
RCIC	-	Reactor Core Isolation Cooling System
RHRS	-	Residual Heat Removal System
RPS	-	Reactor Protection System
RWM	-	Rod Worth Minimizer
SBGTS	-	Standby Gas Treatment System
SBLC	-	Standby Liquid Control
SDC	-	Scram Discharge Volume
SRM	-	Source Range Monitor
TBCCW	-	Turbine Building Closed Cooling Water System
TIP	-	Traveling Incore Probe
TSC	-	Technical Support Center
MFLCPR	-	Maximum Fraction Limiting Critical Power Ratio